

WHAT IS CLAIMED IS:

1           1. A network interface device for processing a telephone call, the network  
2 interface device comprising:

3                 a first communication interface coupled to at least one of a wireless phone  
4 network, a public switched telephone network (PSTN), a satellite phone network, and a voice  
5 over Internet protocol (VOIP) network, wherein the first communication interface receives  
6 the telephone call from any of a plurality of callers remote to the network interface device;

7                 a second communication interface coupled to one or more phones at a user  
8 location, wherein:

9                         the one or more phones are associated with a telephone number, and  
10                         the plurality of callers can call the one or more phones with the  
11                         telephone number;

12                 a telephone switch coupled to both of the first communication interface and  
13 second communication interface, wherein the telephone switch optionally routes an incoming  
14 phone call to the second communication interface if one or more access control rules permit  
15 routing the incoming phone call to the second communication interface; and

16                 a controller that analyzes the one or more access control rules and either routes  
17 the incoming phone call from the first communication interface to the second communication  
18 interface or prevents the incoming phone call from reaching the second communication  
19 interface, wherein the one or more phones ring when the incoming call is routed to the second  
20 communication interface.

1           2. The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the controller routes the incoming phone call to a voice response  
3 system.

1           3. The network interface device for processing the telephone call as  
2 recited in claim 2, wherein:

3                         the voice response system queries a caller of the incoming phone call to record  
4 a greeting, and

5                         the greeting is played before the call is answered.

1           4. The network interface device for processing the telephone call as  
2 recited in claim 3, wherein the greeting is played instead of a ring tone.

1               5.     The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the network interface device is located at the user location.

1               6.     The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the network interface device is physically accessible from outside  
3 the user location.

1               7.     The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the one or more access control rules are stored within the network  
3 interface device.

1               8.     The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the second communication interface is one of a PSTN interface  
3 and a VOIP interface.

1               9.     The network interface device for processing the telephone call as  
2 recited in claim 8, wherein the VOIP interface is one of a wireless Internet interface, a  
3 WIFI™ interface, a power line Internet interface, an ultra-wide band wireless interface, a  
4 cable modem interface, an ethernet interface, and a DSL Internet interface.

1               10.    The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the first communication interface uses a first physical transport  
3 that is different from a second physical transport of the second communication interface.

1               11.    The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the one or more phones are chosen from the group consisting of a  
3 POTS phone, a cordless phone, a WIFI™ SIP phone, and a wired SIP phone.

1               12.    The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the network interface device is integral with at least one of the one  
3 or more phones.

1               13.    The network interface device for processing the telephone call as  
2 recited in claim 1, wherein the controller routes the incoming phone call to voicemail  
3 according to the one or more access control rules.

1           14. A method for processing a telephone call, the method comprising steps  
2 of:

3           receiving a phone call from a first communication interface coupled to at least  
4 one of a wireless phone network, a wired phone network, a satellite phone network, and a  
5 voice over Internet protocol (VOIP) network, wherein the first communication interface  
6 receives the telephone call from any of a plurality of callers remote to the network interface  
7 device;

8           providing a second communication interface coupled to one or more phones at  
9 a user location, wherein:

10           the one or more phones are associated with a telephone number, and  
11           the plurality of callers can call the one or more phones with the  
12 telephone number;

13           analyzing the one or more access control rules; and

14           performing one of a following steps depending on the analyzing step:

15           routing the incoming phone call from the first communication interface  
16 to the second communication interface, and

17           preventing the incoming phone call from reaching the second  
18 communication interface, wherein the one or more phones ring when the incoming  
19 call is routed to the second communication interface.

1           15. The method for processing the telephone call as recited in claim 14,  
2 wherein the one or more access control rules test a caller ID variable associated with the  
3 incoming call.

1           16. The method for processing the telephone call as recited in claim 14,  
2 wherein the one or more access control rules block all incoming calls during a time period.

1           17. The method for processing the telephone call as recited in claim 14,  
2 wherein the one or more access control rules route all incoming calls during a time period to  
3 a voice response system.

1           18. The method for processing the telephone call as recited in claim 14,  
2 wherein the one or more access control rules block one or more incoming calls during a time  
3 period.

1               19.     The method for processing the telephone call as recited in claim 14,  
2     wherein a specified number overrides the one or more access control rules to route the  
3     incoming phone call to the second communication interface.

1               20.     A method for processing a telephone call, the method comprising steps  
2     of:

3               receiving a phone call from a first communication interface coupled to at least  
4     one of a wireless phone network, a wired phone network, a satellite phone network, and a  
5     voice over Internet protocol (VOIP) network, wherein the communication interface receives  
6     the telephone call from any of a plurality of callers remote to the network interface device;

7               providing a second communication interface coupled to one or more phones at  
8     a user location, wherein:

9               the one or more phones are associated with a telephone number, and  
10              the plurality of callers can call the one or more phones with the  
11              telephone number;

12              analyzing the one or more access control rules; and

13              performing one of a following steps depending on the analyzing step:

14              routing the incoming phone call from the first communication interface  
15     to the second communication interface,

16              preventing the incoming phone call from reaching the second  
17     communication interface, wherein the one or more phones ring when the incoming  
18     call is routed to the second communication interface, and

19              routing the incoming phone call to a voice response system.

1               21.     The method for processing the telephone call as recited in claim 20,  
2     wherein the one or more access control rules are entered and modified from within the user  
3     location.

1               22.     The method for processing the telephone call as recited in claim 20,  
2     wherein the user location is a residence and the method is performed within the user location,  
3     but not on the one or more phones.